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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/016,659

12/07/2001

Allan D. Jepson

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07/01/2005

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EXAMINER

LU, TOM Y

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/016,659

Applicant(s)

JEPSON ET AL.

Examiner

Tom Y. Lu

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment and written response filed on 3/31/2005 has been entered and considered.
2. Claims 1, 8, 14 and 19 have been amended.
3. Claims 1-19 are pending.

Response to Arguments

4. Applicant's arguments filed on 3/31/2005 have been fully considered but they are not persuasive.

With regard to specification rejection, the examiner states one of ordinary skill in the art would not be able to make the instant invention without a complete specification, which means incorporating the critical knowledge from various sources. Accordingly to MPEP 608.01(p), all the essential materials related to the invention should be disclosed in the specification and may not be incorporated by reference. Consequently, the rejection is maintained.

The Fleet reference:

Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections. Additionally, the examiner recognizes the newly added limitation of "the relatively large number being greater than three" is nowhere to be found in the specification. Moreover, even if such limitation is included in the claim, The Fleet reference teaches such limitation at page 664, left column, line 13, teaches affine motion model

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I_{C_1} , which represents the global motion, which implicitly teaches the it changes slowly over a relatively large number of frames. Accordingly, the first likelihood value for the stable component would be affine motion model, and the first mixing probability is

$$p_i(I_i(\vec{x}, t) | \vec{\alpha}_i, \sigma_i) = \frac{2\sigma^3}{\pi(\sigma^2 + (I(\vec{x}, t) - I_{C_1}(\vec{x}, t; \sigma_i))^2)^2} \text{ at } I_{C_1} = I_{C_1} \text{ and first parameter of } \vec{\alpha}_1 = \vec{\sigma},$$

and the second likelihood value for the transient component, iconic change $I_{C_2} = I_{C_2}$ and second parameter of $\vec{\alpha}_4 = \vec{\sigma}$.

Specification

5. The specification is rejected as reasoned in the previous office action dated 11/30/2004.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Fleet et al (“A Framework for Modeling Appearance Change in Image Sequences”, Computer Vision, 1998. Sixth International Conference on 4-7 Jan. 1998).

a. Referring to Claim 1, Fleet discloses receiving an image datum corresponding to a most current image frame of the plurality of sequential image frames (see figure 1, these images are the most current image frame a sequence of images, page 660, left column, line 16); determining a first likelihood value for the stable component and a second

likelihood value for the transient component, the first likelihood value indicating a relative consistency between the image datum and the first data parameter, and the second likelihood value indicating a relative consistency between the image datum and the second data parameter (Fleet teaches such limitation at page 664, left column, line 13, teaches affine motion model I_{C_1} , which represents the global motion, which implicitly teaches the it changes slowly over a relatively large number of frames. Accordingly, the first likelihood value for the stable component would be affine motion model, and the first mixing probability is $p_i(I_i(\vec{x}, t) | \vec{\alpha}_i, \sigma_i) = \frac{2\sigma^3}{\pi(\sigma^2 + (I(\vec{x}, t) - I_{C_1}(\vec{x}, t; \sigma_i))^2)^2}$ at

$I_{C_i} = I_{C_1}$ and first parameter of $\vec{\alpha}_1 = \vec{\sigma}$, and the second likelihood value for the transient component, iconic change $I_{C_i} = I_{C_4}$ and second parameter of $\vec{\alpha}_4 = \vec{\sigma}$.); and updating the first mixing probability of the stable component and the second mixing probability of the transient component using the first and second likelihood values, respectively (Fleet at section 4, EM-Algorithm, page 663, right column teaches the mixing probability of the components are continuously updated as to optimize the performance of models).

b. Claims 2-20 are rejected as explained in previous office action dated 11/30/2004.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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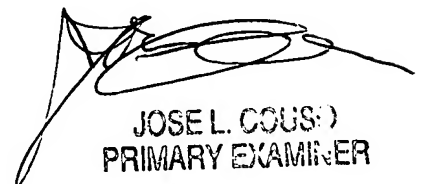
MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Y. Lu whose telephone number is (571) 272-7393. The examiner can normally be reached on 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (571)-272-7695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Y. Lu



JOSE L. COUSO
PRIMARY EXAMINER